

REMARKS

In response to the Office Action mailed April 19, 2011, Applicants have amended claims 1-10, 12, and 14-16 to clarify particular aspects of the present invention. No claims have been cancelled and new claim 39 has been added. It is urged that support for the claim amendments may be found throughout the as-filed specification and original claims, for example, on page 13, lines 22-25 and Figs. 18 and 20. No new matter has been added. The above amendment is not to be construed as acquiescence with regard to the Examiner's rejections and is made solely to clarify particular aspects of the presently claimed invention, without prejudice to prosecution of any subject matter removed or modified by this amendment in a related divisional, continuation or continuation-in-part application. Following the amendment, claims 1-16 and 37-39 are pending and under examination. Favorable reconsideration of the subject application is respectfully requested in view of the above amendments and the following remarks.

CLAIM OBJECTIONS

Claims 1-16, 37, and 38 are objected to because of the following informalities: the term "microparticles" in the last line of claims 1 and 3 should be replaced with the term "micro particles" for consistency, and the comma before the term "binding" in the first line of claim 3 should be deleted. Applicants have amended claims 1 and 3 to recite the term "micro particles" and have deleted the comma before the term "binding" in the first line of claim 3. Accordingly, these bases for objection have been obviated and may be properly withdrawn.

CLAIM RELECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1-16, 37, and 38 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The test for definiteness under 35 U.S.C. § 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986).

Claims 1 and 3 are allegedly indefinite because it is unclear which magnetic field strength is adjusted when the at least one magnet (13) and the ferromagnetic tube (12) are moved in relation to each other. Applicants, without acquiescence, have amended claims 1 and 3 to recite

wherein the magnetic field strength is from the at least one magnet. Accordingly Applicants submit that it is now clear which magnetic field strength is adjusted.

Claim 3 is further allegedly indefinite because it is unclear how the “desired enzymatic reaction and/or binding reaction” in step (c) relates to the binding, isolation, purification, or enrichment of a biological component. Applicants, without acquiescence, have deleted the term “desired” in claim 3; thus, this basis of objection is now moot.

Claim 3 is further allegedly indefinite because it is unclear when the binding, isolation, purification, or enrichment of a biological component occurs and because it is unclear how the micro particles relate to the biological components. Applicants, without acquiescence, have deleted the phrase “to bind, isolate, purify, or enrich biological components from the solution” from claim 3. Thus Applicants submit that it is clear that the binding step of claim 3 occurs in step (c). With regard to how the micro particles relate to the biological components, the Examiner is correct, in that the micro particles bind to the biological components, which further facilitates isolating, purifying, or enriching the components.

The Examiner alleges that claims 4, 7, and 8 are indefinite because the term “a closed reactor unit (60)” lacks antecedent basis in claim 3. Applicants have amended the term closed reactor unit (60) to provide proper antecedent basis for the term in claims 1 and 3.

The Examiner alleges that claim 7 is indefinite because the claim does not recite that the biological components were ever bound to the micro particles and thus, lacks antecedent basis for the term “biological particles bound to micro particles.” Applicants have amended claim 3 to recite that the biological components bind to micro particles; thus obviating this basis of rejection.

The Examiner alleges that claims 13-16 are indefinite because it is unclear how these claims relate to the steps of parent claims 1 and 3. Applicants respectfully submit that claim 13 recites different components bound to the micro particles, which the skilled artisan would understand allows different biological components to be bound, isolated, purified, or enriched by the micro particles. Applicants respectfully submit that claim 14 recites using the micro particles to carryout chromatographic purification of the biological components, which the skilled artisan would understand is one way of further isolating, purifying, or enriching biological components bound to the micro particles. Applicants respectfully submit that claim 15 recites isolating or

enriching biological components that are pathological bacteria, viruses, parasites, or protozoans. Applicants respectfully submit the claim 15 is clearly directed to a subset of biological components of claims 1 and 3. Similarly, Applicants respectfully submit that claim 16 is clearly directed to purifying a subset of biological components of claims 1 and 3, namely DNA, RNA, mRNA, proteins, peptides, cells, or cell organelles.

Accordingly, Applicants respectfully submit that one having ordinary skill in the art would recognize that the metes and bounds of claims 1-16 and 37-38 are both clear and definite. Reconsideration and withdrawal of these bases for rejection are respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103(A)

Claims 1-13 and 16 stand rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over Tuunanen (U.S. Patent No. 6,040,192) in view of Lamb (U.S. Patent No. 2,517,325).

Claims 1-16, 37, and 38 stand rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over Tuunanen and Lamb, in further in view of Ekenberg (U.S. Patent No. 5,567,326).

Applicants respectfully traverse these bases for rejection.

Applicants respectfully submit that obviousness requires a suggestion of all the elements in a claim (*CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003); M.P.E.P. § 2141 (I)) and an explicit, apparent reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does (*KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1731, 1741 (2007); M.P.E.P. § 2142) with a reasonable expectation of success (*KSR Int'l Co* at 1727; *In re Merck & Co., Inc.*, 800 F.2d 1091 (Fed. Cir. 1986); M.P.E.P. § 2143.02).

The Action fails to establish the obviousness of the presently claimed invention because Tuunanen, Lamb, and Ekenberg do not suggest all the claim elements, and thus, the skilled artisan would not have a reasonable expectation of success of deriving the presently claimed invention. Here, the Action fails to suggest wherein the at least one magnet (13) and the

ferromagnetic tube (12) can **each** be moved in relation to **each other** in order to adjust the magnetic field strength of the at least one magnet (*e.g.*, Figs. 18 and 20 of the as-filed specification). In addition, with regard to new claim 39, none of the cited references disclose a device comprising at least one magnet, wherein the axis of the magnetic field is transverse. Moreover, in view of Lamb, the skilled artisan would not have any motivation to include this claimed feature in the device of Tuunanen because Lamb only discloses devices where either the magnet moves in relation to the tube (Figs. 1, 2, 3, and 5) or the tube moves in relation to the magnet (Figs. 4 and 6). The design of the presently claimed ferromagnetic sleeve and magnet, wherein each can be moved in relation to the other, is advantageous because, unlike the devices of Lamb, it allows for complete reduction or elimination of the magnetic strength of the magnet for extremely efficient manipulations of micro particles.

Thus, for at least these reasons, Applicants submit that the Examiner has failed to establish the obviousness against the presently claimed invention. Reconsideration and withdrawal of these bases for rejection are respectfully requested.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that no further impediments exist to the allowance of this application and, therefore, requests an indication of allowability. However, the Examiner is requested to call the undersigned if any questions or comments arise.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283.

Dated: October 19, 2011

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